

Canadian Industries Limited



Annual Report
1942

CANADIAN INDUSTRIES LIMITED

MONTREAL

BOARD OF DIRECTORS

HON. C. C. BALLANTYNE

GEORGE W. HUGGETT

E. J. BARNSLEY

THE RT. HON. LORD MCGOWAN,
K.B.E., D.C.L., LL.D.

SIR EDWARD BEATTY, G.B.E.

ROSS H. McMASTER

WINTHROP BRAINERD

J. G. NICHOLSON

J. THOMPSON BROWN

H. GREVILLE SMITH

JASPER E. CRANE

WENDELL R. SWINT

OFFICERS

President and Managing Director

GEORGE W. HUGGETT

Vice-President

H. GREVILLE SMITH

Treasurer

R. W. SHARWOOD

Secretary

RUSSELL SMITH

Assistant Treasurer

R. C. DOUGHERTY

Assistant Secretary

B. M. OGILVIE

TRANSFER AGENT, REGISTRAR AND
DIVIDEND DISBURSING AGENT

NATIONAL TRUST COMPANY, LIMITED, MONTREAL

CONTENTS

	Page
INTRODUCTION	
Industrial Situation	5
OPERATING REVIEW	
Sales and Production	6
Cellulose Products Group	9
Chemical Group	11
Explosives and Ammunition Group	14
Fertilizer Group	15
MANAGED INVESTMENTS	16
EMPLOYEE RELATIONS	
Employment	18
Employee Representation	19
Industrial Relations Plans	19
Accident Prevention	20
National Service Policy	22
War Savings Certificates and Victory Loans	22
Bonus Plan	23
Organization	24
GENERAL	
Management in Wartime	25
Research	25
DIRECTORS	27
FINANCIAL REVIEW	
Effect of War Conditions on Income	27
Net Income and Dividends	29
Investment Income	31
Current Assets	31
Fixed Assets	32
Taxation	32
FINANCIAL STATEMENTS	35
DEFENCE INDUSTRIES LIMITED	41

ANNUAL REPORT

THE Directors have pleasure in submitting herewith the Annual Report of Canadian Industries Limited for the year 1942.

Each successive stage of the war gives fresh emphasis to the dependence of the final outcome on the assurance of an uninterrupted flow of supplies to all battlefronts, and the planning of future action makes necessary frequent recapitulation of the available resources and productive capacity of the Dominion. It is recognized therefore that the entire nation, as well as shareholders, has a vital interest in how management is discharging its responsibilities in regard to the production of supplies, and the Board feels called upon to review the Company's role during 1942 in as comprehensive a manner as public security permits. Since September 1939, the predominant purpose of Canadian Industries Limited has been to obtain the greatest possible output of essential materials from those resources under its control. In the pursuance of this all-embracing task the Company has had to enter new fields of productive endeavour and to evolve the new policies and practices required for efficient operations in a war economy. It has been obliged to reduce the supplies made available to many established customers and to depart from the regular maintenance and orderly development of its production facilities. There has been, nevertheless, a consistent expansion in the production of much needed chemicals and total output of Canadian Industries Limited for 1942 is 72% higher than the average for the years 1936 to 1939. Wartime adjustments, however, have been costly. Higher manufacturing costs and increased rates of taxation have resulted in a decline in net income to a

level for 1942 that is 13% below the average for the last four years of peace.

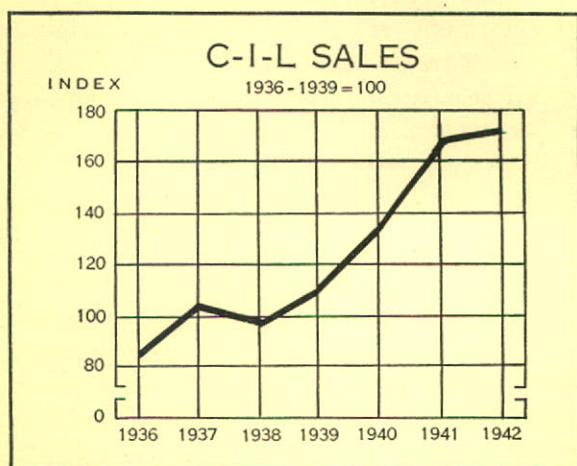
Before proceeding to the recital of facts pertaining solely to Company operations, it may be helpful to review briefly the more significant features of the industrial situation. One of the outstanding achievements of industry was in taking care for more than two years of the unprecedented rise in civilian consumption while producing increasingly greater quantities of war materials. The gradual exhaustion of unemployed productive resources, however, had by the final quarter of 1941 considerably diminished the rate of increase in the nation's industrial output. Further expansion in the production of war materials and in supplies for the United Nations then became dependent on the curtailment of less essential lines of activity. Although the first two stages of the transition to a total war economy, namely the expansion of plant facilities and the attainment of the full utilization of resources, were marked by some distinct deviations from normal commercial practice, it is evident that the third stage—the exclusive concentration on vital production—will be characterized by a much greater degree of centralized direction and control.

The implications of the measures necessary to achieve this last objective merit consideration. The present level of consumption is in excess of current production of civilian goods and this situation is leading to more rigid controls over distribution. Additional steps in this direction will be accompanied, as already announced, by a reduction in non-essential output. Large sections of industry, therefore, face a period of adjustment even more far-reaching than the dislocations which characterized the earlier transition stages.

OPERATING REVIEW

CONTINUED expansion of the Company's diversified activities was affected in 1942 partly by the earlier full employment of most of its resources and partly by the slowing down in the rate of increase in industrial production throughout the country, and total sales were only 2% above the level of the previous year.

Major efforts have for some time been directed towards adapting the output to meet the demand for the most urgently needed chemicals. Instances of extensive output curtailments have not been numerous, but continuous adjustments have been necessary



to maintain a proper balance between the Company's production and the changing character of essential industrial requirements. Such difficulties would be intensified somewhat in the event of widespread curtailment of civilian industries, but no serious diminution in total production is expected as a high proportion of output is of an almost indispensable nature.

In order to view in its right perspective the Company's part in the war effort, its activities should be evaluated in conjunction with those of Defence Industries Limited. In supplying trained personnel and specialized services to this subsidiary, the structure of the parent organization has undergone considerable strain. Much expanded and with many divisions and departments largely staffed by new and inexperienced employees, Canadian Industries Limited has nevertheless been able, by reason of its soundly established organization, to reach maximum production of a wide variety of chemical and allied products needed for military and industrial purposes.

The output of chemicals became of increasingly greater importance as more and more of the nation's resources were given over to the manufacture of those materials required by a country at war. In addition to the chemicals used as raw materials by industry, chemical products are consumed at one or more stages in the production of most essential goods. Demand for the Company's products therefore has been further expanded by the rapid strides in industrialization made since 1939, although in some instances lower chemical consumption has followed the conversion of peacetime plants to war work. Restrictions in the pulp and paper industry and curtailment of gold mining have permitted the diversion of some products to more urgent purposes, but total consumption of chemicals by primary industries has continued to expand. With the exception of nylon, the Company has not been in a position to devote entire plant capacity to the production of finished war materials because of the essential nature of its existing output. It was possible, nevertheless, to utilize certain plant facilities for the production of some wartime requirements and, together with other products, direct shipments from Canadian Industries Limited to the Department of Munitions and Supply and to Defence Industries Limited during 1942 constituted about 7% of total sales.

Extensive adjustments in products and technical processes have been necessary in order to meet the wartime needs of industry and formulae have been altered and new products made available in response to the demands for chemicals to perform specialized functions. In addition the Company has been able to assist in developments directed towards relieving the disruption caused by shortages of natural products; difficulties arising out of the necessity of utilizing substitute raw materials in the manufacture of indispensable chemicals have been overcome; output has been expanded by instituting greater operating efficiencies; and the search for greater economies in distribution has been intensified. The rate at which operating costs have tended to climb has to some extent been retarded by close attention to standardization of products and production methods. Opportunities for simpli-

fication are somewhat restricted, however, by the diversified and specialized functions to be performed by such products.

CELLULOSE PRODUCTS GROUP

The consistent expansion which had characterized the production of "Cellophane" since its introduction in 1932 was halted at the end of 1941 and sales for 1942 were much below the 1941 level. As the principal ingredients which enter into its production are needed by direct war industries, it was necessary to rely extensively on substitute raw materials whose use was feasible only after the adoption of new formulac. The limited supplies available did not, however, permit utilization of the Division's full productive capacity. Although the employment of "Cellophane" as a merchandizing aid has become a war casualty, its protective qualities enable it to meet many essential demands. Food products, various items of military equipment and other supplies for the armed forces are wrapped in "Cellophane" in order to render packages proof against moisture, grease and gases. Cellulose tape is required in the construction of aircraft, and "Cellophane" is replacing rubber in the moulding of plywood aircraft parts; but these last-mentioned outlets account for only a minor proportion of total sales. As a result of the reduced output combined with the greater demand for war purposes, "Cellophane" is obtainable only for the more essential civilian needs and distribution has been placed under the direction of the Controller of Supplies. The adoption of this covering as the solution to many military packaging problems was hastened by the experimental work of the National Research Council to whom the services of the Division's technical staff were made available.

Despite extensive changes in the character of production, sales of the "Fabrikoid" Division continued to expand and were considerably higher than in the previous year. Early in 1942 the Division was faced with the virtual elimination of natural rubber supplies, which in the past had been one of its principal raw materials. The resulting problems were overcome by greater reliance on pyroxylin-coated fabrics and the substitution of a synthetic resin coating for waterproof materials. As such products

cannot be processed with rubber coating equipment, maximum production had to await the installation of additional facilities which came into operation early in the year. By this means it was possible to meet the greatly expanded demand for wearing apparel which in 1942 comprised the largest part of the Division's sales. The effectiveness of the synthetic resin coating as a substitute for the rubber-coated product has led to its adoption as raincoat material for the forces. A new synthetic plastic, suitable for extruding tubing for use on aircraft, is being manufactured and the volume required is expanding. There has been a decline, however, in sales of upholstering material for military vehicles. The higher rate of output for war and essential industry renders the Division less vulnerable to any reduction in demand for its products that may result from further curtailment of civilian industry. A supply of all the raw materials needed in the manufacture of the numerous products of the Division is by no means assured and the outlook for 1943 indicates the possibility of restricted production of some lines unless substitute raw materials can be found and new processes evolved.

Sales of the Paint and Varnish Division have greatly expanded since the year 1939, although the product specifications and the industries served have undergone a far-reaching transformation. The cessation of passenger automobile production in 1942 eliminated a major source of demand and sales were also severely affected by the general restriction of the manufacture of durable goods for civilian requirements. Other classes of civilian business—finishes for industrial construction and residential building—have been more nearly maintained. The decrease in demand that followed the gradual reduction in civilian industry has been more than offset by sales for war purposes as a very large proportion of the equipment used by the forces is of metal construction and must be given a protective coating. Such finishes have to conform to rigid specifications in performance and application and, in view of the specialized requirements, products with properties quite different from peacetime paints and varnishes had to be developed quickly. The ability to meet these new standards was made possible by a highly trained technical staff with wide experience

in providing for individual needs of industries in peacetime. In addition to the new products developed, formulae of other paints and varnishes had to be altered or new ones evolved in order to make use of substitute materials. Distribution of approximately 90 raw materials is restricted and of about 300 necessary ingredients used in 1939 almost half can no longer be utilized in the manufacture of products for civilian consumption or are in short supply. It was therefore necessary to withdraw or restrict the sale of many lines, although essential needs were met. While product simplification and longer continuous operations have made for lower production costs, much of the improvement has been offset by the widespread adjustments necessitated by war-time conditions.

In response to the demand of essential industry, strenuous efforts have been put forward to develop many of the known potentialities of plastics and sales of the Plastics Division for 1942 reached a new high level. A considerable portion of output is now required for war purposes but the manufacture of finished parts for shells and bombs was probably the most significant new task undertaken during the year. Although sales of nylon monofilament, principally to brush manufacturers, made rapid progress owing to the shortage of natural bristles, the superior qualities possessed by the synthetic product assure a ready market. Demand for staple items manufactured by the Division, such as tooth-brushes, was much higher than in the previous year. A number of other products are supplied on a resale basis as sufficient quantities can still be imported and domestic demand does not yet permit economical manufacture in this country. Sales of transparent plastic sheeting for aircraft and motor vehicles, safety glass interlayers, and adhesive for laminated plywood showed an expansion during the year and are meeting very urgent war needs. Adoption of substitute raw material has added to the cost of plastics produced for civilian consumption.

CHEMICAL GROUP

Because of the urgent need for many chemicals produced by the Alkali Division, operations have been expanded consistently

since the outbreak of war and a further increase was achieved during 1942. In contrast with previous years it was necessary to rely more heavily on process modification rather than plant extension for the needed improvement in production, but minor installations of new facilities have been necessitated by special wartime requirements and by the endeavour to co-ordinate output with the changed character of demand. Chlorine, as an important ingredient in degreasing compounds, smoke-producing chemicals and to a lesser extent in other wartime products, has become the most indispensable chemical produced by the Alkali Division and its consumption has advanced steadily. All essential needs have been met, although the amount available to the pulp and paper industry has been reduced by governmental action. Additional chlorine productive capacity is expected to be in operation early in 1943. Caustic soda is produced along with chlorine by the electrolysis of salt brine and supplies have therefore correspondingly increased. The quantities available are more than sufficient to meet the requirements for the manufacture of textiles, pulp and paper, soap and other products, and the additional consumption of the aluminum industry. Bleaching powder, which in addition to its normal uses is required for air raid precaution work, is being distributed on an allotment basis.

Sulphuric acid and most of the other chemicals produced by the General Chemicals Division are used by industry primarily as agents to perform functions that would otherwise be impracticable or extremely laborious. In order to meet the increase in demand that accompanied the rise in general business activity, plants were operated at close to maximum capacity during 1941 and therefore only a minor expansion in output was possible in the following year. The over-all supply position of sulphuric acid, which is under the direction of the Chemical Controller, was eased somewhat during 1942 and after providing for the amount required for the manufacture of military explosives, sufficient quantities were available to take care of essential consumers. More than twenty types of consumers, including mining, fertilizer, pulp and paper, textile and foodstuffs, require large quantities of industrial chemicals and with very few exceptions

demand was higher than in 1941. Considerable difficulty has been encountered in maintaining supplies of many important chemicals as a large number are no longer obtainable and others are available only in limited quantities. Owing to the uncertain import situation, manufacture of zinc ammonium chloride, which is in strong demand for war work, was undertaken, but the majority of chemicals in short supply are not considered sufficiently essential to justify the installation of new plant facilities under present conditions. As in previous years the technical staff has been called upon to advise customers on the use of substitute products and efforts have been put forward to develop measures that would aid in the conservation of supplies of vital materials.

Nylon yarn, which was formerly handled on a resale basis, is now manufactured from flake polymer in a newly constructed plant in this country. Operation began in June 1942 and the rate of production has steadily improved since that time but, as the entire output is taken for the manufacture of parachutes, no supplies for civilian purposes are available. In co-operation with the Government, research is being conducted at the plant laboratory on fabrics for military purposes and other possible wartime uses of nylon.

The curtailment of civilian industry combined with the conversion of customers' plant facilities to war work has had a widespread effect on the activities of the Organic Chemicals Division and sales were lower than in the previous year. In the textile industry replacement of civilian by military production has resulted in a considerable decrease in the demand for the wide range of dyes handled by the Division. The restricted output of gold mining has been followed by an extensive decline in the consumption of sodium cyanide and the cessation of passenger car tire production has adversely affected sales of rubber chemicals. Since supplies of neoprene, a synthetic rubber, are limited to the quantity that can be obtained from the United States, its use has been severely restricted. Largely because of the demand which has developed in different branches of war industry, sales of trichlorethylene, used for metal degreasing, and carbon tetrachloride, an ingredient in fire extinguishing compounds, have

shown a progressive increase. In order to provide the needed quantities of trichlorethylene it was necessary to enlarge plant capacity.

In contrast with most other divisions of the Company, the Salt Division has not experienced any serious supply difficulties. Sales have shown a consistent expansion as salt brine is a basic raw material in the production of chlorine and a number of other chemical products. Although a considerable proportion of output is required in chemical manufacture, large sales are made to the food industry and for household consumption, and salt is also used extensively in agriculture and tanning. Its demand for curing purposes is steadily increasing because of the greater exports of meat products. The higher level of production was largely achieved by the development of a new operating technique, which has also resulted in a higher quality product. Packaging difficulties were overcome by the replacement of jute and cotton containers by those manufactured from paper.

EXPLOSIVES AND AMMUNITION GROUP

The types of products manufactured by the "Dominion" Ammunition Division underwent considerable change during 1942 and total sales exceeded the level of the previous year. As a result of material shortages, production of commercial ammunition is now strictly limited to essential needs. The output of military ammunition expanded progressively, as the necessary equipment was made available and personnel acquired the requisite skill. Plant capacity was enlarged during the year in order to assure adequate supplies of the specialized detonating compounds manufactured for government-owned plants. In addition to the technical and supervisory assistance rendered to the government-owned small arms ammunition plants, a large proportion of the Division's personnel and general plant services is engaged on work for Defence Industries Limited. The priority given to work of this nature and the extensive training programme that has been necessary to maintain operating efficiency have given rise to many problems which the Division has successfully surmounted.

In the first two years of the war, sales of the Explosives Division made only a moderate advance as activities leading to increased demand for commercial explosives did not expand at the same rate as general business throughout the country. The year 1942 showed a net reduction in consumption as the effect of marked curtailment in gold mining was not fully offset by higher sales to the producers of base metals and for wartime construction of highways and power projects. Following extensive development work, military products requiring specialized skill are being produced by equipment installed since the outbreak of war and at the request of the Department of Munitions and Supply production has been started on several new types of explosives. Continuous adjustments in formulae and processes have been required in order to overcome raw material difficulties, substitutes being used wherever possible in order to conserve materials in short supply. The Division has co-operated with government departments on various research projects and war material based on the results of this work is being produced.

FERTILIZER GROUP

The sharply increased demand for the food products of the Dominion, both for domestic consumption and for export to Great Britain, combined with a shortage of farm labour, has necessitated greater use of fertilizer in order to obtain maximum agricultural yields. The Government has encouraged more intensive crop cultivation by higher agricultural prices and the payment of a bonus to farmers employing fertilizer in the growing of certain crops. Although fertilizer production has been well above rated capacity, the greater output was not sufficient to meet all demands. More effective utilization of capacity was achieved, however, by a considerable reduction in the number of formulae and by product simplification. As many fertilizer ingredients are also consumed in the manufacture of military explosives, some materials are in short supply. Substitutes can be employed to a limited extent, but production in 1943 will be dependent on the available quantity of raw materials. In order

to ease the burden on transportation facilities a zoning plan agreed upon by the industry and approved by the Government has been adopted whereby fertilizer will be shipped to farming areas from the nearest source of supply. The technical staff of the Division continued to co-operate with government departments in educational work and the advisory services provided for farmers were maintained.

MANAGED INVESTMENTS

ACTIVITIES of Defence Industries Limited, being of a special nature, are reviewed separately and a full statement is included in this report in the form of a supplement. (See page 41.)

Despite some disruption, total production of other subsidiary and managed companies was further expanded during 1942 and an increasingly greater proportion of output is being taken by war and essential industry. Higher manufacturing costs and the increase in taxes absorbed the major share of the profits that resulted from the greater efforts put forward, and net earnings for 1942 showed only a moderate improvement over the previous year.

Sales of Aluminate Chemicals Limited for 1942 reached a new high level, but the upward trend of the past several years may not be maintained because of raw material supply difficulties. Industrial water treatment is particularly important in factories operating under war conditions and this specialized service has been greatly assisted by the production equipment installed in 1941.

Wartime changes in the needs of the widely diversified industries served by Canadian Hanson and Van Winkle Company Limited and restricted supplies of metals and chemicals are having a limiting effect on sales, but the total for 1942 was approximately equal to 1941. Output consisting of metal plating supplies and equipment, degreasing solvents and machines, galvanizing fluxes and other materials is largely taken by those durable goods industries which are either directly or indirectly

engaged in war work. The local management has been faced with many difficult technical problems and has been notably successful in developing the use of alternative materials and processes. Earnings for the year showed a moderate advance.

The direct war work undertaken by Canadian Safety Fuse Company Limited has about offset the reduction in volume of commercial business, which resulted principally from the greatly decreased safety fuse requirements of the gold mining industry. Profits have declined to a level below that of pre-war years and dividends have again been reduced.

An increase in the available quantity of imported materials during the year permitted a further advance in total sales of Canadian Titanium Pigments Limited although earnings were slightly lower than in 1941. A large part of sales is for war purposes and demand from the paint industry is increasing.

The newly constructed plant for the manufacture of carbon bisulphide by the associate company, Cornwall Chemicals Limited, attained satisfactory production during 1942, all of which was consumed in specialized war uses or by essential industry.

Wartime conditions have had a marked effect on nearly every branch of the operations of Dunlop Tire and Rubber Goods Company Limited. The shortage of natural rubber has virtually eliminated the commercial tire business, but the loss has been largely made up by the manufacture of rubber products for military vehicles and aircraft and certain specialized equipment for war purposes. Earnings were only slightly lower than in 1941 and the dividend on the common stock remained at the same rate as in the three preceding years.

Neepawa Salt Limited supplies the western market with salt produced at the plant located in Manitoba. New facilities were completed in 1941 and sales and profits for 1942 were accordingly at a higher level than in recent years.

EMPLOYEE RELATIONS

EMPLOYMENT

The subject of employment in Defence Industries Limited, employees of which number approximately 31,500, is referred to in the supplementary section at the end of this report. In comparison with the total at the end of 1941, the number of employees in Canadian Industries Limited at 31st December, 1942, had increased by about 1,000 or 17% to a total of approximately 7,000 employees.



This growth in employment reflects the increase in employees resulting from the commencement of nylon yarn manufacture, as well as additional employment attributable to the manufacture of products replacing chemicals previously imported, to changes in the character of production and other causes traceable to war conditions. During 1942 replacement of men by women became still more general throughout factories and offices owing largely to the continued exodus of men to government-owned plants and

the armed forces, and of the total employed at the year-end less than half had been with the Company since before the war.

EMPLOYEE REPRESENTATION

For the ninth consecutive year works council elections under the Employee Representation Plan were held in November and of the eligible employees in attendance at works where voting took place it is estimated that 98% went to the polls. On the thirteen councils currently in office there are 108 representatives of whom 65 are elected and 43 are appointed members. Two new councils were formed in 1942 by majority vote of the employees at the respective works.

Works councils demonstrated their acceptance of joint responsibility, particularly by the assistance rendered in considering the problem of maintaining over-all efficiency of operations under present difficult conditions.

INDUSTRIAL RELATIONS PLANS

In view of the general interest which is being shown in schemes proposing state-aided social security measures of greater scope and wider application than hitherto contemplated, it may not be inappropriate to refer to the progress made in this direction over the years through the co-operative endeavours of employers and employees. Some of the earlier welfare plans introduced by employers have since been described as paternalistic because they tended to reduce individual responsibility, and employees were not given opportunity to express views regarding the benefits they were to receive. In later years various forms of consultative procedure were developed and co-operative plans directed towards increased social security for employees were formulated after joint discussions of aims and needs.

By means of systematic studies in the field of industrial relations and the development of employee representation through works councils, the Company has endeavoured to maintain a progressive policy in regard to matters concerning employees. A great number of the mutually beneficial results are not reflected in formal plans and the war has caused consideration of some desirable changes to be postponed, in particular the proposal to

introduce a contractual and contributory retirement plan. In order that the nature of the main provisions of the Company's industrial relations plans with social security features may be seen at a glance, they have been briefly summarized and presented in table form. National unemployment insurance, introduced in 1941, the cost of which is borne jointly by the Government, employers and employees, should also be mentioned under this heading.

The detailed descriptions of the Company's industrial relations plans included in several earlier reports have been omitted this year, but it should be recorded that in 1942 the Co-operative Health Insurance Plan was with minor restrictions made available to employees who had joined the Company since the outbreak of the war.

At the year-end there were 1,167 employees with ten or more years' service and 98 employees in the class of those with thirty or more years' service. The usual awards were made under the Service Pin and Watch Plan, 28 employees receiving watches commemorating twenty-five years' service and 593 gold pins were awarded.

ACCIDENT PREVENTION

Notwithstanding the multiplicity of supervisory problems and the strain of maintaining production at capacity levels, the Company's policy of regarding its accident prevention programme as an integral part of its manufacturing operations has been steadfastly adhered to. In conjunction with Safety Committees, education and training media, inspection of properties and other related activities, the No-Accident Record Plan, which has been in operation for twelve years, serves to promote the highest possible standards in safe operating conditions and practices. The Plan stimulates and maintains general interest in the over-all safety programme by the award of individual prizes to employees upon the completion at their works of appropriate periods without accident, and during the year six works of the Company attained their objectives. There was an increase in the number of man-hours worked and, correspondingly, in the num-

CANADIAN INDUSTRIES LIMITED
INDUSTRIAL RELATIONS PLANS
(WITH SOCIAL SECURITY FEATURES)

NAME	PURPOSE	TO WHOM APPLICABLE	COMPANY'S PARTICIPATION
Co-operative Savings Plan. A yearly plan first introduced in 1935.	To encourage regular saving. Since 1940 the major portion of employees' savings under the Plan has been invested in war savings certificates.	Employees having one year's service on 1st January of the current year and earning not more than \$250 a month.	Company contributes in war savings certificates 25 cents on each dollar invested in war savings certificates at end of Plan.
Co-operative Health Insurance Plan. Original plan introduced in 1935.	To provide against extraordinary hospital, surgical and certain other medical expenses arising from non-occupational disabilities.	Employees having six months' service, excluding a limited number of wartime employees because of certain disabilities.	Premiums paid jointly by Company and participating employees.
Disability Wage Plan. Original plan introduced in 1937.	To provide against total loss of earnings during periods of disability resulting from illness or accident. Maximum payment equivalent to thirteen weeks' full wages following first week of absence.	*Payroll employees having one year's service, excluding a limited number of wartime employees because of certain disabilities.	Total cost borne by Company.
Vacation Plan. A yearly plan first introduced in 1935.	To provide an annual vacation with pay of two weeks or one week depending on length of service.	*Payroll employees who on 30th April of each year have one year's service receive two weeks; those with six months' service receive one week.	Total cost borne by Company.
Employees' Benefit Plan. Original plan introduced in 1920.	To provide on the death of an employee or pensioner a benefit ranging from \$1,000 after six months' service to \$1,500 after five years.	Pre-war employees (including those on national service) and pensioners.	Total cost borne by Company.
Pension Plan. Original plan introduced in 1919.	To provide monthly payments to employees substantially incapable of continuing to perform normal duties. (Non-contractual).	Pre-war employees having 15 years' service.	Total cost borne by Company.

*Similar to treatment accorded salaried employees.

ber of injuries suffered by employees and the accident-frequency rate for the year was slightly higher than that shown for 1941. Although the average severity of the injuries suffered by employees was decidedly less, as indicated by the accident-severity rate for the year, it is with regret that the Board records the death of three employees from causes arising out of their employment.

NATIONAL SERVICE POLICY

At the time leave of absence is granted to pre-war employees to enter the forces, either as volunteers or under the provisions of the National Resources Mobilization Act, they are given an immediate grant equivalent to one month's Company pay and subsequent monthly grants representing the amount, if any, by which Company pay exceeds service pay and dependants' allowances, or, if there are no dependants, the amount by which two-thirds of Company pay exceeds the service pay and allowances. Wartime employees who leave the Company to enter the forces may receive one grant equivalent to two weeks' Company pay. The National Service Policy also provides for the payment of grants to employees in the Reserve Army who attend summer camp for periods longer than the paid vacation for which they may be eligible, and for the automatic granting of leave of absence and payment of appropriate grants if they should be called out in an emergency.

The roll of employees absent on national service grows steadily longer and to those who have won promotion and distinction the Company extends congratulations. In assuring all absent employees of its regard for their welfare, the Company has especially in mind those who have been reported wounded, missing or prisoner of war; and the shareholders will wish to join the Board in expressing deep sympathy to relatives of the employees who have lost their lives in the service of their country.

WAR SAVINGS CERTIFICATES AND VICTORY LOANS

The total amount of money saved by employees and invested in war savings certificates, under the Co-operative War Savings Plan, was considerably increased in 1942 by participation of eligible employees who joined the Company since September 1939.

Including the certificates contributed by the Company, a total of approximately \$325,000 was invested in war savings certificates through the Plan, and a further investment of almost \$100,000 resulted from additional authorized deductions from earnings. Total subscriptions by employees of Canadian Industries Limited to the Second and Third Victory Loans amounted to \$958,000.

BONUS PLAN

Over a period of twenty-four years the Bonus Plan has been a method of giving special recognition to employees whose services, extending beyond satisfactory performance of regular duties, have been distinguished by unusual ability and manifest interest in furthering the progress of the Company. As the fund available for bonuses is dependent upon the earnings of the Company, the amount awarded for bonuses for the year 1942 suffered a reduction from the previous year and was appreciably lower than in the years immediately preceding the war. Under the provisions of the Plan the fund is established each year by the Board of Directors at not more than 15% of the earnings of the Company in excess of 6% on the capital stock and earned and capital surplus; the income from and the investment in General Motors Corporation is not included in the calculations.

As a result of an amendment adopted by the Board on 15th October, 1942, the Plan, while retaining the feature of delivering the bonus awards in four equal annual instalments, permits the decision by the Bonus Committee as to whether the instalment shall be delivered in cash, shares, or both, to be deferred until the year in which each instalment falls due. Accordingly, awards for the year 1942 were made by the Committee, which is appointed annually and is composed of directors who are not salaried officers or employees of the Company, to 192 employees including the President and the Vice-President; the first quarter of the award is deliverable in cash and the form of the delivery of the remaining instalments of the award as they become due is to be decided annually by the Bonus Committee in office. In reaching its decisions regarding individual awards the Bonus Committee makes careful study of the recommendations of senior executives as to

the merit and performance of employees coming under their jurisdiction. The operation of the Bonus Plan is subject to the approval of the Board of Directors and to the provisions of the Wartime Salaries Order.

The new amendment to the Plan does not prevent the Company from reverting to the practice of delivering shares of the Company's non-voting common stock when personal income tax rates are at levels which make it reasonable to expect participants to retain the shares delivered to them. That stock-ownership in the Company is a source of encouragement to employees has been proved by experience, and resumption of share deliveries as soon as practicable is considered highly desirable.

ORGANIZATION

In presenting a report of the Company's activities, the discussion of policies and developments and the reviewing of operations and results frequently tend to obscure a feature of the year's work which is of first importance. Probably it is no exaggeration to say that the past year has confronted the officials and managers throughout the Company with problems unprecedented in number and difficulty, and to have satisfied the demands made upon them while under continual pressure constituted a severe strain. Although it is the privilege and responsibility of the President, on behalf of the Board, to sign this record of twelve months of progress, the credit for the measure of success achieved should be bestowed among all members of the organization who exercise the function of management.

It is not supposed that shareholders need to be reminded of the extent to which the Company's accomplishments in 1942 were dependent on the diligence and ability of employees. Nevertheless, the directors are glad of this opportunity to express on behalf of the shareholders and for themselves, the warmest praise not only of the achievements of the personnel as a whole, but also of the spirit in which individuals have performed their duties under trying conditions. In these times something more than the desire to perform the daily task enters into the effort put forth. Men and women in factories and offices, however

tedious the job or irksome the inconveniences, are aware of the urgency of the demands made upon them by a nation at war. Their endeavours give expression to their personal determination to share in vanquishing the enemy and restoring peace to the world. In this purpose the entire Company is joined and will continue to serve to the utmost of its capacity.

GENERAL

MANAGEMENT IN WARTIME

In an over-all evaluation of the present role of industry there must necessarily be recognition of the fundamental changes in the functions of management that have resulted from the wartime organization of the nation's economy. The volume and character of production are now directly or indirectly determined by the Government and normal commercial activities are subordinated to the immense task laid upon industry. In order to co-ordinate the vast and diversified effort involved, governmental agencies have been given authority for directing the use of plant facilities, for controlling the distribution of raw materials and finished products, and for mobilizing the labour supply of the country. The replacement of the free working of economic forces by centralized direction narrows the limits within which management has freedom of action, but the circumstances are such that its obligations are increased rather than lessened. One of the major functions of management has become the co-ordination of the activities under its control with the directives of Government, by formulating policies and adhering to practices that conform rigidly with national objectives. Although the wartime organization has facilitated the mobilization of the nation's resources, responsibility for the actual physical transformation of raw materials into the products so urgently needed must inevitably remain with industry, and management and labour are deserving of credit for the results achieved.

RESEARCH

The chemical industry owes much of its success in meeting the growing and diversified demands of an intensive war pro-

duction programme to its research facilities and the resourcefulness of its personnel. The Company's chemical and engineering specialists have been employed in many projects, directly or indirectly related to Canada's war effort. Through their ability output of military explosives and much needed chemicals has been greatly increased by the development of speedier and more economical manufacturing processes. A ceaseless search has been carried on for new sources of raw materials and special attention has been given to the recovery and utilization of by-products. Laboratory work has resulted in the removal of harmful impurities and the elimination of hazards in certain operations and specifications have been altered after experimentation in order to make the best possible use of existing skill, equipment and resources. Furthermore, technical assistance has been rendered to various government departments and to many customers in problems arising from the effect of wartime conditions on agriculture, mining and various other industries.

In its research activities the Company has derived great benefit from a constant exchange of information with Imperial Chemical Industries Limited, England, and E. I. du Pont de Nemours and Company, U.S.A. Close collaboration, moreover, has been maintained with the National Research Council, and any technique that might aid in the common war effort has been placed during the emergency at the disposal of the Government.

Although research specifically connected with possible wants of the post-war world has had to be entirely subordinated to the more pressing demands of wartime production, not all the recent investigations and discoveries of chemistry are without bearing on peacetime progress. As a result of the impetus given to scientific investigation by the war, developments in medicine, food, clothing, transportation and housing, holding promise of materially improved living standards, have been accelerated. The task of transforming laboratory findings into usable products, however, is time-consuming and much of this work must await the day when the reconversion to a peacetime basis of the nation's industrial plant is begun.

DIRECTORS

THE resignation early in the year of Mr. Harry G. Haskell, who had served as a director since the incorporation of the Company in 1910, was accepted with much regret. His mature judgment and wide experience were of immeasurable value and, upon his retirement, he carried with him the gratitude of the Company for his steadfast support and devotion. He was succeeded on the Board by Mr. Wendell R. Swint.

FINANCIAL REVIEW

THE Balance Sheet and Statements of Income and Surplus for the year ended 31st December, 1942, together with the Auditors' Report to the Shareholders, are presented at the conclusion of this review.

A downward trend in the net income of the Company, which in 1942 was 26% less than in 1939, has been brought about by the war. The 1942 profit was lower in spite of a further expansion in plant facilities and a further increase in the volume of sales, and the following tabulation indicates briefly the extent to which investment and volume of business have increased since the outbreak of war in contrast with the lower return to the shareholders.

INVESTMENT SALES AND EARNINGS

YEAR	PERCENTAGE INCREASE OVER AVERAGE OF YEARS 1936-1939		EARNINGS PER SHARE OF COMMON STOCK
	Manufacturing Investment (Net)	Sales	
1939	5%	12%	\$8.52
1940	10%	35%	7.27
1941	15%	68%	7.22
1942	21%	72%	6.12

In a war economy the necessary policies adopted to convert the activities of the nation from peace to war have a more direct

bearing on the profit accruing to the shareholders than the effect of the expansion in the investment of manufacturing facilities or the actual productive efforts of the organization. These policies achieve desired results during the emergency years in preventing inflation and in directing productive efforts along certain lines which provide minimum requirements for civilians and maximum requirements for munitions. It is equally important that conditions should exist in the post-war years that will provide the widest opportunities for low-cost production of peacetime goods. The measures at present in force are unquestionably assisting towards winning the war, and shareholders, along with other sections of the community, are aware of their importance and by a co-operative attitude have made their effective functioning possible.

Although almost all wartime regulations have tended to affect profits adversely, the three most significant factors of government policy which merit special consideration are as follows:

- (1) taxation;
- (2) centralized control of industrial activity;
- (3) control of selling prices.

Taxation is discussed hereafter in greater detail but at this point suffice it to record that taxes are the greatest single factor in the lowering of net income.

While wartime conditions have necessitated constant adjustments in operations and policies, one of the most significant developments has been the removal from managerial control of many items that affect production cost. Raw materials are no longer necessarily purchased from the lowest cost producer as consideration has to be given to transportation difficulties, regional supply problems and, in many instances, the use of higher cost substitute products. Although rates of wages have been subject to control, automatic adjustments have been tied in with the variations in the cost-of-living index.

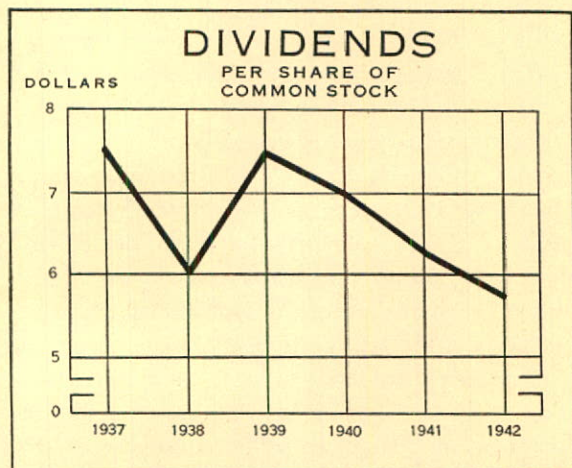
Under normal conditions an uncontrollable increase in production cost could be met at least in part by intensified research

for more efficient equipment or by the discontinuance of those products manufacture of which had become uneconomical. A third alternative course of action, that of passing on to the consumer increases in production costs, was never relied upon to any great extent. In wartime such corrective measures can be utilized only to an extremely limited extent. The difficulty of obtaining new equipment has narrowed the opportunities for improving efficiency by the adoption of new manufacturing processes. Many of the Company's products are of an essential nature and their manufacture must be continued and where necessary expanded regardless of the relationship between manufacturing costs and selling prices. Finally, the regulations of the Wartime Prices and Trade Board prohibit the recovery of cost increases by adjustments of selling prices unless specially authorized, and manufacturers and distributors have had to absorb the greater part of the rise in operating costs as their share of the "squeeze" in order to support the maintenance of the price ceiling. Another factor which also contributed to higher production cost in the Company during the year was the operation of many units beyond their most economical level in order to obtain increased output of essential materials. Some savings, on the other hand, resulted from a continued search for more economical operations and from the curtailment of activities that could be dispensed with under present conditions. Nevertheless, the inevitable result in many instances was higher cost per unit of output which could not be offset by the increased volume of business.

NET INCOME AND DIVIDENDS

Net income for 1942 amounted to \$4,611,000, equivalent to \$6.12 per share of common stock, and was 14% lower than in the previous year. Measures taken to achieve maximum utilization of resources for essential purposes invariably result in additional losses at some future date, and a further amount of \$200,000 has, accordingly, been set aside out of earnings to bring the War Contingencies Reserve up to \$950,000. Despite the higher tax

rates in effect during 1942, the provision for income and excess profits taxes was slightly below the level of the previous year because of the lower income. An amount of \$60,700, equivalent to 2% of the total taxes payable, is refundable in the post-war years and has not, therefore, been charged against 1942 income.



Regular quarterly dividends totalling \$7 per share were maintained on the preferred stock. From a high of \$7.50 in 1939, dividends on the common stock have had to be consistently reduced and the amount of \$5.75 per share declared in 1942 is 50 cents per share lower than in the previous year. Equal disbursements of \$1.50 per share in April, July and October were followed by a payment of \$1.25 per share in December. Total net income exceeded payments to shareholders by \$259,000 and the balance of earned surplus amounted to \$5,337,000 at 31st December, 1942, including an amount of \$60,700 for the portion of taxes refundable after the war. Under the regulations of the Foreign Exchange Control Board approximately two-thirds of this surplus is frozen and cannot be distributed by way of dividends.

INVESTMENT INCOME

Dividends received from subsidiary and managed companies and interest on marketable securities were 13% lower than in 1941. The major item in the decrease was the lower dividends declared by General Motors Corporation which in U.S. funds amounted to \$2 per share for 1942 as compared with \$3.75 in the previous year. Higher income was received from Defence Industries Limited, of which more detailed information is given under the section dealing specifically with that company. It is significant to note, however, that the dividends from Defence Industries Limited for the three and one-quarter year period since the outbreak of war are equivalent to approximately \$1.17 per share of Canadian Industries Limited common stock. This amount has accumulated during the period commencing September 1939, and the larger part was in respect of the years 1941 and 1942. Dividends declared by other subsidiary companies in 1942 were in the aggregate lower than in the previous year.

In conformity with established practice, the accounts of subsidiary companies are not consolidated with those of Canadian Industries Limited and investment income includes that portion of the earnings of subsidiaries represented by the Company's share of the dividends declared. All subsidiaries earned profits during 1942 and total income was \$106,000 greater than the amounts distributed in dividends. The exact excess profits tax liabilities of all companies have not yet been determined but it is believed that the reserves provided are adequate.

CURRENT ASSETS

Large expenditures on plants and equipment were incurred, but net current assets amounting to \$15,468,000 on 31st December were higher than in the previous year owing to additions to reserves and the retention of a portion of earnings within the Company. Although war conditions have necessitated the more active employment of funds in the conduct of operations, cash and marketable securities were only slightly lower than in the

previous year. Inventories totalling \$11,954,000 at 31st December were valued at the lower of cost or market, less a reserve provided in previous years against possible future loss in value. The higher investment in inventories in 1942 was attributable to requirements of the nylon plant and to a number of factors inherent in the wartime situation, including the higher average costs of raw materials and finished products.

FIXED ASSETS

The investment in plants, buildings, equipment and land increased by \$3,435,000 during 1942 and amounted to \$42,519,000 at 31st December. Wartime restrictions and curtailment of civilian consumption of chemical products have necessitated a sweeping revision in the planned development of production facilities. In contrast with previous years, extensive provisions were not made for the manufacture of new products. The greater part of the new capital outlay of \$1,981,000 authorized during the year is being expended on the nylon plant, all the production from which is urgently needed to meet the increased military demand. The balance of the amount authorized represented further necessary extensions or replacements of existing essential units.

An amount of \$2,085,000 was expended for repairs and maintenance but as such work was restricted to the minimum required for efficient operations, major renovations will be necessary and allowances for such outlays were made in determining the amount of reserve for war contingencies. In addition, depreciation totalling \$2,714,000 was charged against operating costs.

TAXATION

Recognizing the revenue requirements of the Government and the part that taxation plays in the fight against inflation, the people of this country have accepted wholeheartedly the very heavy tax burden involved. The severe increase in personal income taxes, supplemented by a system of forced savings and a programme of voluntary loans, is necessary to reduce consumer pur-

chasing power to a level that will make price control workable. Taxes paid by industry, however, still constitute the largest source of revenue obtained by government levies and were increased in 1942 by the imposition of a 100% excess profits tax, with 20% refundable in post-war years. Since the 1942 corporation tax rates came into effect on 1st July and applied on only half of the income earned in 1942, there will be an automatic increase in taxes on any 1943 income in excess of the marginal level at which the 100% tax applies.

The provision of \$3,581,000 for income and excess profits taxes in respect of the Company's 1942 income has been reduced by an amount of \$60,700, representing the portion of the excess profits tax refundable after the war. This refundable portion is repayable to the Company within two years after the date proclaimed by the Governor-in-Council as being the date of the cessation of hostilities, or at such earlier date as may be determined. As the amount of the refund is determinable and unconditional as to ultimate use it has been recorded as an asset and has been included to form part of the earned surplus arising out of the operations for the year 1942. Although the total tax bill represented a considerably higher proportion of earnings, the amount was slightly lower than in the previous year as the reduction in income more than offset the effect of the higher tax rates. The Company's liability will be stated in the tax returns as exactly as can be determined from the available regulations and interpretations. These sources, however, are not always so clear as to eliminate all doubt of interpretation and the tax provision for 1942, therefore, contains an amount of approximately \$100,000 against possible adverse decisions. Income and excess profits taxes provided by subsidiary companies total \$1,600,000 as compared with \$1,300,000 in 1941. The amounts mentioned above do not include other forms of taxes, such as sales tax, war exchange tax and property taxes.

In order to illustrate the growth in the relative importance of taxation during the war, the following table shows the percentage increase of taxation in each of the years 1940 to 1942

over the average of the years 1936 to 1939, compared with similar changes for wages and salaries, selling prices and earnings available for dividends.

INDEX OF VARIATION FROM THE AVERAGE OF
YEARS 1936-1939
(Average 1936-1939 = 100)

Year	Taxes	Total Salary and Wage Payments	Selling Prices	Earnings per Share Available for Dividends
Average				
1936-1939	100	100	100	100
1940	303	132	100	101
1941	339	169	102	100
1942	299	201	102	83

The experience of recent years has demonstrated that taxation can be employed to bring about fundamental economic changes but it must be recognized that the achievement of the expected advance in post-war living standards could be postponed indefinitely by the failure to eliminate the restrictive influence of the wartime taxation policies.

On behalf of the Board of Directors,

G. W. HUGGETT,
President and Managing Director.

Montreal, Canada, 12th March, 1943.

FINANCIAL STATEMENTS

AUDITORS' REPORT TO THE SHAREHOLDERS

Canadian Industries Limited,
Montreal.

We have audited the books of account and financial records of Canadian Industries Limited for the year ended 31st December, 1942, and have obtained all the information and explanations we have required.

The inventories shown on the attached Balance Sheet have been determined and certified by the management of the Company.

In accordance with Section 114 of the Dominion Companies Act, we report that profits earned by subsidiary companies for the year 1942 have been included in the attached accounts only to the extent of the dividends declared and received or receivable by the Company.

We certify that, in our opinion, the attached Balance Sheet and relative Statements of Income and Surplus are properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs as at 31st December, 1942, and the result from operations for the year ended that date, according to the best of our information and the explanations given to us and as shown by the books of the Company.

P. S. ROSS & SONS,
Chartered Accountants.

Montreal, 19th February, 1943.

CANADIAN INDUSTRIES LIMITED

STATEMENT OF INCOME AND EARNED SURPLUS

FOR THE YEAR ENDED 31ST DECEMBER, 1942

Income from Operations after charging all expenses including depreciation.....			\$ 7,406,519
Income from Investments.....	\$ 938,269		
Loss on sale of Marketable Securities.....	13,688	924,581	
		<u> </u>	\$ 8,331,100
Provision for War Contingencies.....	\$ 200,000		
Reserve for income and excess profits taxes.....	\$ 3,581,000		
Less: Portion refundable after the war.....	60,700	3,520,300	3,720,300
		<u> </u>	
NET INCOME FOR THE YEAR.....			\$ 4,610,800

Dividends:

Preferred 7% Cumulative Stock.....	\$ 325,500		
Common Stock (\$5.75 per share).....	4,025,811	4,351,311	
		<u> </u>	\$ 259,489
Earned Surplus at 1st January, 1942.....		5,077,801	
EARNED SURPLUS AT 31ST DECEMBER, 1942....		<u> </u>	\$ 5,337,290

Note: Included in the expenses charged against Income from Operations are the following items: depreciation \$2,713,506, remuneration of executive officers including bonus awards \$196,592, directors' fees \$20,000 and legal expenses \$4,865.

STATEMENT OF CAPITAL SURPLUS

FOR THE YEAR ENDED 31ST DECEMBER, 1942

CAPITAL SURPLUS AT 1ST JANUARY, 1942.....	\$15,002,824
Gain on sale of Assets.....	76,390
CAPITAL SURPLUS AT 31ST DECEMBER, 1942....	<u> </u>
	<u> </u>

CANADIAN INDU

BALANCE SHEET AT

ASSETS

CURRENT ASSETS

Cash.....	\$ 2,267,442	
Marketable Securities (market value \$1,441,800)...	1,452,812	
Dominion Government Bonds.....	\$1,300,000	
Other Bonds.....	152,812	
Accounts Receivable, less reserve for doubtful accounts.....	4,885,433	
Customers.....	\$4,324,359	
Subsidiary Companies.....	287,764	
Other Accounts.....	273,310	
Inventories, valued at the lower of cost or market price, less reserve against future loss in inventory values.....	11,954,179	\$20,559,866

DEFERRED CHARGES TO OPERATIONS..... 122,760

PORTION OF TAXES REFUNDABLE AFTER THE WAR..... 60,700

PREFERRED SHARES IN TRUST FOR EMPLOYEES'
WELFARE PLANS..... 599,076

FIXED ASSETS

Plants, Buildings and Equipment, based on the appraisals of the National Appraisal Com- pany (1927 to 1929) as adjusted by the Com- pany's own engineers, with subsequent additions at cost.....	40,835,307	
Land, at cost.....	1,684,008	
Goodwill, Patents and Processes.....	3,378,151	45,897,466
Investments in Subsidiary Companies.....	3,304,411	
Shares in Other Companies (including market- able shares, book value \$2,500,000, market value \$6,118,000).....	3,787,785	7,092,196
		<u>\$74,332,064</u>

Approved on behalf of the Board,

G. W. HUGGETT	} Directors.
C. C. BALLANTYNE	

STRIES LIMITED

31st DECEMBER, 1942

LIABILITIES

CURRENT LIABILITIES

Accounts Payable.....	\$ 3,263,683	
Subsidiary Companies.....	9,377	
Dominion and Municipal Taxes.....	1,737,449	
Taxes.....	\$3,837,449	
Less Amounts Prepaid.....	<u>2,100,000</u>	
Dividends Declared.....	81,375	\$ 5,091,884
DEFERRED LIABILITIES		288,797

RESERVES

Depreciation of Securities.....	1,200,000	
Depreciation of Plants, Buildings and Equipment.....	21,489,077	
Pension and Benefit Plans and Self Insurance..	4,346,195	
(In addition \$527,974 is held in an irrevocable Pension Trust Fund)		
War Contingencies.....	<u>950,000</u>	27,985,272

CAPITAL STOCK

Authorized	Shares	
Preferred 7% Cumulative Stock (par value \$100).....	75,000	
Common Stock (no par value)		
Class "A" Voting.....	660,000	
Class "B" Non-voting.....	<u>690,000</u>	
Issued and Fully Paid		
Preferred Stock.....	46,500	4,650,000
Common Stock		
Class "A".....	615,974	
Class "B".....	<u>84,167</u>	700,141
		15,899,607

CAPITAL SURPLUS	<u>15,079,214</u>	35,628,821
EARNED SURPLUS (Including \$60,700 for the portion of 1942 taxes refundable after the war).....		5,337,290
		<u>\$74,332,064</u>

This is the Balance Sheet referred to in our attached report of even date.

P. S. ROSS & SONS, Chartered Accountants.

Montreal, 19th February, 1943.

*(Supplement to the 1942 Annual Report to Shareholders of
Canadian Industries Limited)*

DEFENCE INDUSTRIES LIMITED

FOR more than three years Defence Industries Limited, a war-time subsidiary of Canadian Industries Limited, has been engaged exclusively in the erection and subsequent operation of wartime chemical and explosives plants, small arms ammunition plants and shell filling plants on a scale far surpassing in size and significance anything previously undertaken by the chemical industry in this country.

Canadian Industries Limited has been in a position to make a material contribution to Canada's immense munitions programme because there existed within its organization personnel with the needed managerial ability, technical knowledge and operating skill which could be drawn upon to provide the nucleus working force for this vast new undertaking. All the directors and officers of Defence Industries Limited are full-time employees of that company or of its parent organization and many transfers have been made to the subsidiary company from the managerial staff of Canadian Industries Limited; moreover the time and specialized abilities of officials and departments of the parent company have always been unreservedly at the disposal of Defence Industries Limited. Extensive reliance was placed upon the experience of engineers and chemists, trained in commercial operations, and skilled operators possessing the required knowledge of chemical processes were released for service in the war plants.

Patents as well as specialized technical knowledge have been voluntarily placed by the parent company at the disposal of the Government for military purposes during the emergency and royalty income has been waived. Since experience in Canadian Industries Limited was confined almost entirely to commercial production it was necessary in certain instances to draw on associated British and United States concerns for some of the specialized information needed in the new type of production. These sources rendered great assistance both to the parent company and the subsidiary and to other Canadian firms included in the chemical and explosives programme.

The desirability was recognized of handling direct war production separately from the operation of the established plants of Canadian Industries Limited, and, accordingly, Defence Industries Limited was incorporated for the purpose on 14th September, 1939. As stated in last year's report, it is the government policy that large-scale production of those products used exclusively for war purposes should be provided for by public funds and centered in government-owned plants. In practice, the formation of the separate organization has eased the administrative problems that accompany such a huge undertaking and has resulted in the segregation of government funds and managerial responsibility in connection with the government plants. Moreover, it has enabled key employees to devote their entire energies to the subsidiary's part in the nation's war programme and has served to assure that direct military requirements obtain priorities in the allocation of the resources at the disposal of the parent company.

CONSTRUCTION

Since February 1940 when actual construction of government plants began, twelve new units, most of them major projects, have been placed in operation and two others are nearing completion. Measured by the investment required, the new war plants are now double the size of the production facilities owned by Canadian Industries Limited in the last year of peace.

The progress of the construction programme has been dependent on ability to obtain the necessary equipment and, despite the unavoidable obstacles encountered, most projects were completed and in operation well ahead of original schedule, and in the aggregate were below the estimated cost. The construction sub-contractors and the suppliers of the vast quantity of equipment and raw materials exerted every effort to hasten completion of the work undertaken and to such associates is due great credit for their part in the results accomplished.

Although the emphasis has been shifted from construction to actual production, a large volume of building remains to be completed on projects more recently undertaken and, in addition, the need for increased output of some products has made neces-

sary major extensions to existing units. Large-scale rearrangements of certain plants and additions to original equipment have followed the evolution of more effective weapons, and the changing character of warfare is not likely to permit a halt in this feature of the Company's task.

PRODUCTION

The activities of Defence Industries Limited embrace the production of explosives, small arms ammunition and chemicals and the operation of two large shell filling plants and a fuse assembly plant. Products manufactured in the government-owned plants managed by the Company are widely diversified and include cordite, TNT, smokeless powder, fuse powder, smokescreen chemicals, various types of ammunition and a number of specialized war materials. Although the volume of production cannot be disclosed, it can be said that output is in excess of original expectations as many units have been able to reach operating levels well above designed capacity. There have, of necessity, been various instances of temporary curtailments in production. Major changes in design and specifications, in order that munitions production might keep abreast of developments in military science and tactics, have necessitated periodic declines in the volume of output, and operations of some units, particularly in the latter half of 1942, were at a reduced rate because maximum capacity was in excess of current requirements.

In general, the labour supply has been adequate and restrictions resulting from shortages of material have not been severe although some processes have had to be revised to make use of Canadian substitute products. Production methods have also been altered to obtain more efficient operation, to utilize waste products and to improve quality. Although costs are an important factor in the production of munitions, the first consideration must necessarily be the greatest possible volume of output of the right quality at the right time. Nevertheless, in so far as it has been possible within the limits of the emergency, strenuous efforts have been made to operate the government-owned plants economically, and in spite of the inevitable difficulties involved, production costs have for the most part been lower than origin-

ally estimated. Furthermore, products of Defence Industries Limited have met the most rigid specifications with a minimum of rejections.

EMPLOYEES

At 31st December, 1942, employees of Defence Industries Limited numbered approximately 31,500, of whom more than one-third were women, and further expansion is expected when projects at present under construction enter the production stage. Over 27,000 of the total employed had been with the Company less than two years at the end of 1942, and except for the initial group of employees provided by Canadian Industries Limited only a limited number had any previous experience with production operations of this type, their present work being in most cases radically different from former occupations. Training new employees in the handling of explosives and in production and supervisory techniques has been, therefore, an extensive undertaking of major importance. In all plants accident prevention is given constant study and the Company endeavours to provide sound education in the operations to be performed, to promote safe operating practices and to eliminate production hazards. Comparative figures show that the accident rate has been kept remarkably low and employees are to be commended on their excellent response to the appeal to observe scrupulously all safety regulations.

For those plants situated in rural areas, living accommodation for some of the men and women has been erected on behalf of the Government by Wartime Housing Limited and by Defence Industries Limited, and other facilities, such as restaurant service, community halls, recreation centres, hospitals and chapels, have been provided. The accommodation thus made available is not elaborate but it has been carefully designed to meet immediate needs without undue expense. Curtailment of transportation facilities as a result of gasoline rationing has necessitated the construction of additional living quarters at certain plants.

Joint discussion of matters affecting employee relations has advanced through representation procedure adopted to meet local conditions. A high degree of collaboration and a willingness

to deal amicably have been accorded management and these qualities are characteristic of the type of relationship most conducive to realization of the mutual desire to speed the war effort. Through the formation of joint production committees and the introduction of suggestion award systems progress was made in bringing the ability and experience of employees to bear on problems of efficiency and simplification of operations.

In view of the Company's vital part in the flow of war supplies, it is natural to think first of its activities in terms of construction and production. But it is not forgotten that behind the speed of operations and the volume of output is an army of men and women in plants and offices to whom should go unstinted praise, not only for their arduous efforts, but also for the spontaneous manner in which they have collaborated with management to meet urgent demands and to overcome the difficulties incidental to such rapid growth of a large organization. It is a pleasure to record that employees of Defence Industries Limited responded to the Second and Third Victory Loan campaigns by subscribing a total of \$2,891,000 and during the year, through deductions from earnings, purchased war savings certificates amounting to over \$875,000.

FINANCE

The funds required to erect the new plants are supplied by the Department of Munitions and Supply acting on behalf of the Canadian Government and as representative of the British Government. In all but the small arms ammunition branch of the Company's activities, its relationship with this Department is through Allied War Supplies Corporation, a crown company formed to develop and co-ordinate the production of wartime chemicals and explosives.

The capital investment of Canadian Industries Limited in the subsidiary company totals \$2,000,000 and was originally provided to cover the cost of expanding two plants transferred to Defence Industries Limited and to supply the working capital required for their operation. In peacetime these two units had been used by Canadian Industries Limited for the production of the very limited quantities of military explosives required by the

Government. In the initial stages of the war the output from these plants was of vital importance but the production is now small in comparison with that from the government-owned plants. Selling prices on the output from these plants were fixed to yield a low margin of profit but operating efficiency has reduced manufacturing costs and prices have been lowered voluntarily in order to keep profits in line with estimates.

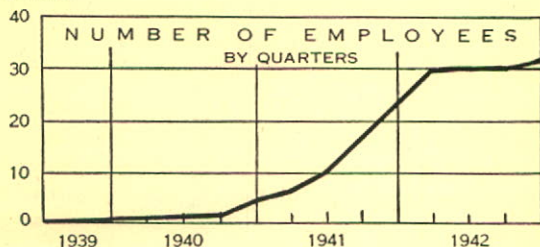
A conception of the size of the undertaking and the actual accomplishment in connection with the construction and operation of the government-owned plants can be given by citing the costs incurred for the accounts of the British and Canadian Governments on construction and operations, which to the end of 1942 have totalled more than \$260,000,000.

Defence Industries Limited is compensated for its services by means of management fees representing a small percentage based on the total volume of work involved. In some contracts the fees comprise a fixed sum per unit of output and in other contracts a relatively small fixed sum plus a correspondingly lower fixed sum per unit of output. The rates of these fees have subsequently been reduced in certain instances where production costs have been lower than estimated or output has been in excess of designed capacity. After deducting administrative costs and estimated income and excess profits taxes, but not the portion of the excess profits tax refundable after the war, the total net income from management fees for the year 1942 is equivalent to one-fifth of one per cent of the total of the costs incurred by Defence Industries Limited on behalf of the Government in respect of the year's operations. The net income from management fees, together with the net revenue earned on the operations for which capital was provided by the parent company, constitutes the only source of income in Defence Industries Limited. Virtually the whole of the income has been declared in dividends and in the year 1942 the dividends totalled \$430,000 as compared with \$269,000 in respect of the year 1941.

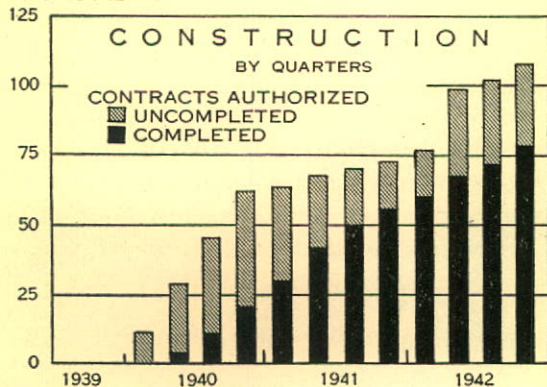
(This entire supplement is part of the 1942 Annual Report to Shareholders of Canadian Industries Limited signed by the President and Managing Director on behalf of the Board of Directors on 12th March, 1943.)

DEFENCE INDUSTRIES LIMITED

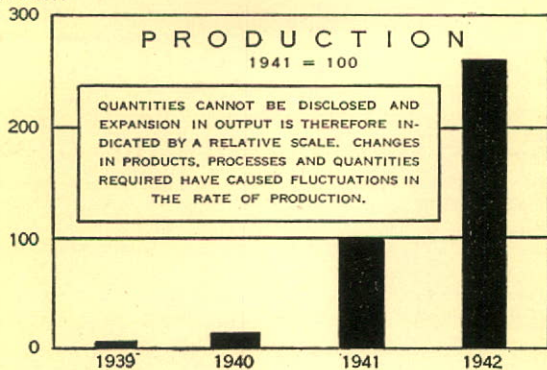
THOUSANDS



MILLIONS OF DOLLARS



PER CENT



CANADIAN INDUSTRIES LIMITED

CELLULOSE PRODUCTS GROUP

"CELLOPHANE" DIVISION

Plain transparent and moistureproof transparent "Cellophane" cellulose film.

"FABRIKOID" DIVISION

"Fabrikoid", pyroxylin and synthetic resin coated fabrics; "PX" bookbinding, case coverings; "Washade" window shades; "Alprox" quarterlinings, shoe buckram and other footwear materials.

PAINT AND VARNISH DIVISION

Finishes for every purpose in home and industry, including such trade-mark products as "Duco", "Dulux", "Pyralux", "Trutone" White and "Cilux" Enamel. A complete range of finishing materials for the automotive, railway, marine, aircraft, industrial, maintenance and retail trades.

PLASTICS DIVISION

Combs; tooth-brushes; "Lucite" and other transparent and opaque plastic sheets, rods and tubes; moulding powders; "Plaskon" resin glue for plywood; X-ray film and chemicals; "Lucitone" denture material; nylon monofilament for brush bristles, etc.

CHEMICAL GROUP

ALKALI DIVISION

Caustic soda and other alkalis; chlorine; bleaching powder and other chlorine derivatives.

GENERAL CHEMICALS DIVISION

Commercial and C.P. acids; ammonia and other refrigerant gases; zinc and ammonium chlorides; fluxes; sulphites and hyposulphite; silicates and numerous reagents and heavy chemicals.

NYLON DIVISION

Nylon yarn for the textile industries.

ORGANIC CHEMICALS DIVISION

Dyestuffs; dry colours and pigments; intermediates; mining chemicals; neoprene, rubber colours and chemicals; solvents; ceramic materials and other organic chemicals.

SALT DIVISION

All grades of "Windsor" salt for household, agricultural and industrial purposes.

EXPLOSIVES AND AMMUNITION GROUP

"DOMINION" AMMUNITION DIVISION

Small arms ammunition; loaded and empty shot shells and metallic cartridges embodying "Super-Clean" non-mercuric priming; railway fuses and track signals, explosive rivets, etc.

EXPLOSIVES DIVISION

Commercial explosives and blasting accessories.

FERTILIZER GROUP

FERTILIZER DIVISION

Superphosphate; complete fertilizers; "Gardenite" plant food; insecticides; "Cel-O-Glass"; "Sol-Min" and "Pig-Min" (mineral supplements); "Stable-Phos"; "Delsterol" (Vitamin "D"), etc.

NB—Chemicals and allied products are subject to wartime restrictions.

